III.   Remarks

Claims 6-8, 11-15 were previously pending. Claims 6, and 15 have been amended. No new matter has been added by the amendments. Support for the amendments in Claim 6, 8, and 12 may be found, inter alia, in paragraphs [0078] and [0090]:

[0078]: …Next, the user of the network home appliance 2 logs in from outside using his ID and password, and identifies a terminal to control from the list as described above to activate the network home appliance control section 42 (step S13). The network home appliance control section 42 processes all instructions on the server side and sends appropriate commands to the terminal equipment to control it. …

[0090]:..When a special command is required to manage the network home appliance 2, the command setup section 22 coverts a command included in the communication from the IPv6 server 7 to a command specific to the model. …

Reconsideration of Claims 6-8, 11-15 in light of the above amendments and the following remarks is respectfully requested.

Claim Rejections under 35 U.S.C. §112

The Office Action indicated that Claims 6 and 15 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 15 have been amended. Applicants submit that the claims are definite and request withdrawal of the rejection of claims 6 and 15 under 35 U.S.C. § 112, second paragraph.

Claim Rejections under 35 U.S.C. §102

The Office Action indicated that Claim 15 was rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,523,696 to Saito et al. ("Saito"). Applicants traverse the rejection.

Saito does not disclose a client device with the full limitation recited in Claim 15. The client device of claim 15 has the limitations of "a device that is communicable with the relay device but cannot independently connect to the Internet", and "a relay device installed in said client device". The examiner equates the client device of Claim 15 with "DVD Player 208" and "Digital VTR 209", and the relay device of Claim 15 with the AV connection device "that maybe provided in a PC". However, Saito does not describe or suggest any example of the AV connector

being installed within DVD Player 208 or Digital VTR 209. Furthermore, the example of the AV connector being provided in a PC is certainly not an example of a relay device being installed in "a device that is communicable with the relay device but cannot independently connect to the Internet".

Accordingly, Saito does not disclose the client device and the relay device of Claim 15.

For the same reason, Saito does not disclose the relay device and client device according to claim 8, and 12, as well.

Rejections under 35 U.S.C. §103(a) (Saito in view of Breh)

The Office Action indicated that Claims 6, 8 and 11-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,523,696 to Saito et al. ("Saito") in view of U.S. 2004/0054789 to Breh ("Breh"). Applicants respectfully traverse the rejection of Claims 6, 8, and 11-12.

With respect to Claim 6, the examiner states that Saito may not explicitly disclose a command conversion section on the server that converts command before sending to the client device in the receiving home network, but Breh discloses a command conversion section for converting a command to be sent to the client device to a command in a predetermined format specific to the predetermined model for controlling the client device, if the model identification section determines that the client device or the relay device is of the predetermined model.

According to Breh, a network portal ("mediator" in the claims) uses "an appliance" in a home network for establishing a communication link to <u>devices at the user's home which are not directly connected to the Internet</u>. The network portal converts a generic command from the user for controlling a device into <u>an "appliance" specific command</u> and sends it to the appliance in the home network. However, the appliance" specific command cannot control the device as is, and the appliance in turn has to convert the appliance specific command into a device specific command (Claims 1, 32, and 39). Breh's Claim 39 recites "a <u>network appliance connected to said at least one device...translates said network appliance specific command to said device specific</u>

command". This feature is also clear from the detailed description of Breh. For example, paragraph 0067 states "The device presentation handler 236 is configured to convert inbound requests originated by a web browser into a generic markup language documents such as an XML document. Thus, e.g., an HTTP request is converted into a device command that is dependent on the respective device by taking the particularities of the respective device in to account. It may be formed by a predefined format, such as an XML structure." Even thought it states an HTTP request is converted into "a device command", it is nevertheless in the XML format, which cannot be read by the target device without being further converted into "a device specific command" by "the appliance" to which the device is connected.

With the configuration of Claim 6 of the present application, an instruction for a target device is converted into a command in a target-device's specific format. Therefore, Breh does not disclose a server with a command conversion unit for converting an instruction for controlling the network-enabled home appliance received from a user to a command in a predetermined format that is specific to the network-enabled home appliance.

Further more, devices such as conventional TV, VCR or CD units cannot receive a control command directly from the Internet, or be operated by the command, because they do not operate in the TCP/IP protocols. The present invention makes a direct control of such device in a private network via the Internet possible through the tunneling connection established between the server on the Internet and the device (network-enable home appliance) in the private network. Breh does not disclose, teach, or suggest a tunneling connection between the network portal and a device, or between the network portal and the "appliance." Therefore, even if Breh had taught that a generic command for controlling a device received from a user was converted into a device specific command at the network portal located on the Internet, the device specific command could not have been sent to the device as is.

As stated above, in the case of the present invention, a tunneling connection is established between a server on the Internet and a network-enabled home appliance or a client device, it becomes possible for a user to send, via the Internet, a command for controlling the network-enabled home appliance or the client device, which has been converted in a format specific to their respective device, without requiring another command conversion unit on the

private network side. Saito has a AV connection device and Breh has an "appliance" on the private network side in order to convert a command into a device specific format.

Claim 8

With respect to "a model identification section for determining if the client device is of a predetermined model or if the relay device is of a predetermined model" contained in the server of Claim 8, the examiner equates it with the 1394/IP service location processing function 226, which "searches out a terminal or a service connected to the 1394 bus or receives its registration, recognizes what terminal/service exists on the 1394 bus". The 1394/IP service location processing function 226 contained in each AV connector searches out a terminal or service connected to the 1394 bus which is physically connected to the AV connector on the private network side, and it does not search out a terminal or service connected to the 1394 bus of another AV connector on the public network side. On the other hand, according to Claim 8, the model identification section contained in <u>the server on the public network side</u> determines if a client device/relay device in a private network, to which the server is connected via the Internet, is of a predetermined model. Accordingly, Saito does not disclose the model identification section of Claim 8.

In addition, as stated for Claim 15, Saito does not disclose a client device of Claim 8 with its full limitations. The client device of claim 8 has the limitations of "client device located within a private TPC/IP based network", "a device that is communicable with the relay device but cannot independently connect to the Internet", and "a relay device installed in said client device". The examiner equates the client device with "Digital VTR 209" and "Home Automation Network 212", and the relay device with the AV connector in Saito. "Digital VTR 209" and "Home Automation Network 212" in Saito operate with 1394 protocols, and are connected with a TPC/IP network through a 1394 bus, therefore they should not be interested as "client device located within a private TPC/IP based network." Furthermore, Saito does not describe or suggest any examples of the AV connector being installed within "Digital VTR 209" and "Home Automation Network 212".

Furthermore, both Saito and Breh do not disclose, teach or suggest a server on the Internet with a command conversion section for converting an instruction for controlling said client device received from a user to a command in a predetermined format specific to the predetermined model, if the model identification section determines that the client device or the relay device is of the predetermined model. As explained for Claim 6, a network portal ("mediator" in the claims) described in Breh uses "an appliance" in a home network for establishing a communication link to devices at the user's home which are not directly connected to the Internet. The network portal converts a generic command from the user for controlling a device into an "appliance" specific command and sends it to the appliance in the home network. However, the appliance" specific command cannot control the device as is, and the appliance in turn has to convert the appliance specific command into a device specific command (Claims 1, 32, and 39). Breh's Claim 39 recites "a network appliance connected to said at least one device...translates said network appliance specific command to said device specific command". This feature is also clear from the detailed description of Breh. For example, paragraph 0067 states "The device presentation handler 236 is configured to convert inbound requests originated by a web browser into a generic markup language documents such as an XML document. Thus, e.g., an HTTP request is converted into a device command that is dependent on the respective device by taking the particularities of the respective device in to account. It may be formed by a predefined format, such as an XML structure." Even thought it states an HTTP request is converted into "a device command", it is nevertheless in the XML format, which cannot be read by the target device without being further converted into "a device specific command" by "the appliance" to which the device is connected.

Further more, devices such as conventional TV, VCR or CD units cannot receive a control command directly from the Internet, or be operated by the command, because they do not operate in the TCP/IP protocols. The present invention makes a direct control of such device in a private network via the Internet possible through the tunneling connection established between the server on the Internet and the device in the private network. Breh does not disclose, teach, or suggest a tunneling connection between the network portal and a device, or between the network portal and the "appliance." Therefore, even if Breh had taught that a generic command for controlling a device received from a user was converted into a device specific command at the network portal located on the Internet, the device specific command could not have been sent to the device as is.

As stated above, in the case of the present invention, a tunneling connection is established between a server on the Internet and a client device, it becomes possible for a user to send, via the Internet, a command for controlling the client device, which has been converted in a format specific to the model of the client device, without requiring another command conversion unit on the private network side. Saito has a AV connection device and Breh has an "appliance" on the private network side in order to convert a command into a device specific format.

Claim 11

As explained above with respect to Claim 8, Saito does not disclose a model identification section of Claim 8. Consequently, Saito does not disclose the communication session disconnection section contained in the server recited in Claim 11, which disconnects communication sessions or limiting packet transmissions if the model identification section determines that the client device or the relay device is not of the predetermined model.

Claim 12

With respect to Claim 12, with the same reason stated for Claim 8, Saito nor Breh, separately and in combination do not disclose, teach or suggest a server according to Claim 12 with its full limitations.

Rejection under 35 U.S.C. § 103(a) (Saito in view of Breh and Tsuchiya)

Claim 7 is rejected under 35 U.S.C. § 103(a) over Saito in view of U.S. 2004/0054789 to Breh ("Breh"), and further in view of Tsuchiya (US 6118784).

Applicants traverse the rejection because Tsuchiya does not supply the required features missing from Saito and Breh (e.g. a control section configured to receive a packet from said server located on the Internet, the packet including a command for controlling the network-enabled home appliance, said command being in said predetermined format specific to the network-enabled home appliance when received from said server). Accordingly, Applicants request withdrawal of the rejection of Claim 7 under 35 U.S.C. §103(a) over Saito in view of Breh and Tsuchiya.

Rejection under 35 U.S.C. § 103(a) (Saito in view of Sekiguchi)

Claims 13 and 14 are rejected under 35 U.S.C. § 103(a) over Saito in view of U.S. 6957257 to Sekiguchi ("Sekiguchi").

Applicants traverse the rejection because Sekiguchi does not supply the required features missing from Saito (e.g. a relay device installed in a client device which is communicable with the relay device but cannot independently connect to the Internet). Accordingly, Applicants request withdrawal of the rejection of Claims 13 and 14 under 35 U.S.C. §103(a) over Saito in view of Sekiguchi.

V.   Conclusion

In light of the foregoing, it is believed that all matters set forth in the Office Action have been addressed and that independent Claims 6, 8, 12, 13, and 15 are in condition for allowance. Dependent Claims 7, 11, and 14 depend from and further limit the independent claims and, therefore, are allowable as well.

Respectfully submitted,

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